UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

NOVEMBER 1967

PART II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

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Bureau of Commercial Fisheries
Tuna Resources Laboratory
P. O. Box 271
La Jolla, California 92038

*Part 1 - "Fishery Products Production and Market Data" is issued by the Bureau of Commercial Fisheries, Market News Service, Post Office Building, San Pedro, California

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
NOVEMBER 1967

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Charts

Figure 1.--Mean sea surface temperatures (°F) derived from approximately 9000 observations. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2.--Deviation of sea surface temperatures (°F) from long term charts of H. O. 255. Hatched areas are colder in 1967.

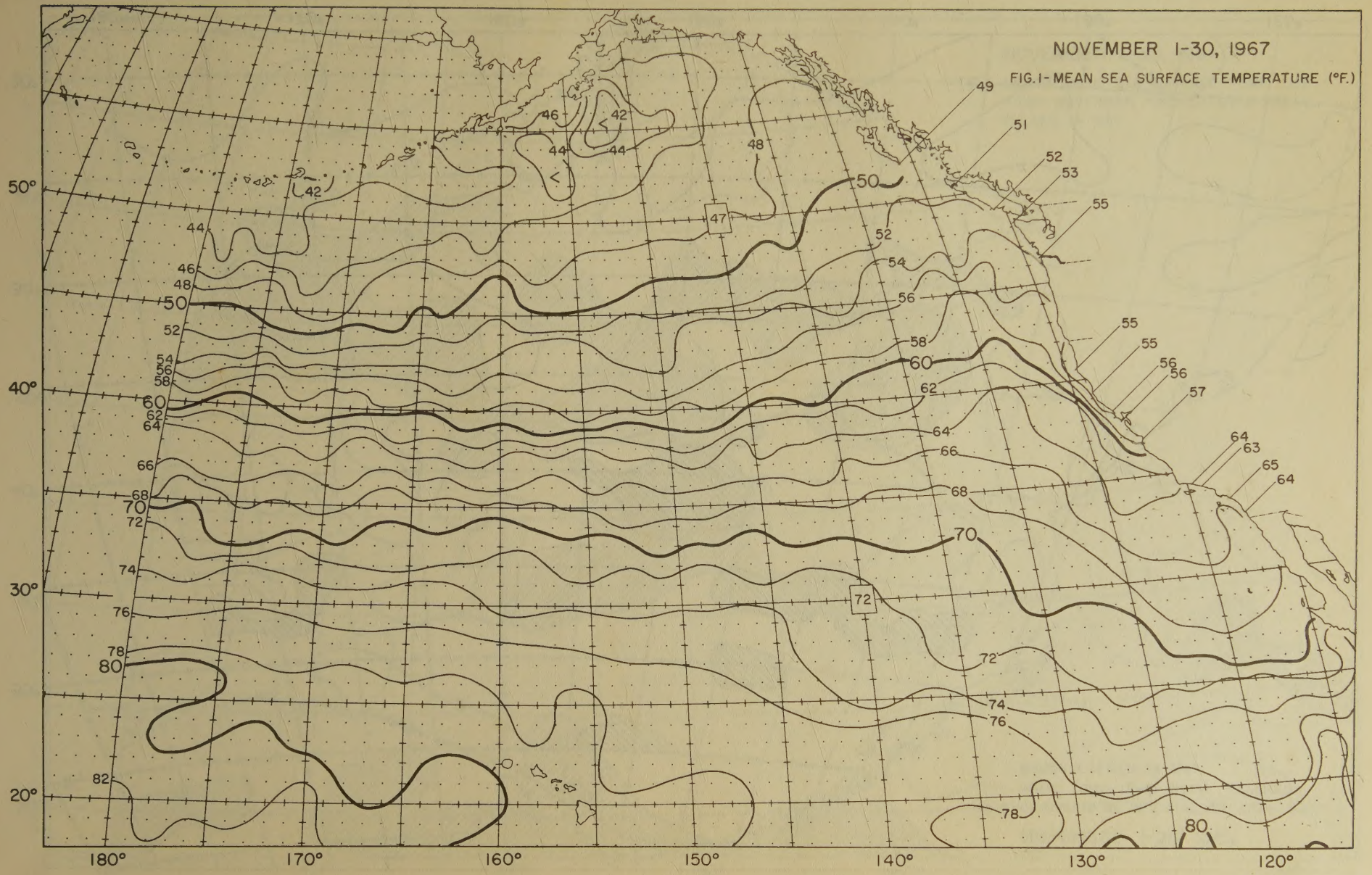
Figure 3.--Deviation of sea surface temperatures (°F) from those of November 1966. Hatched areas are colder in 1967.

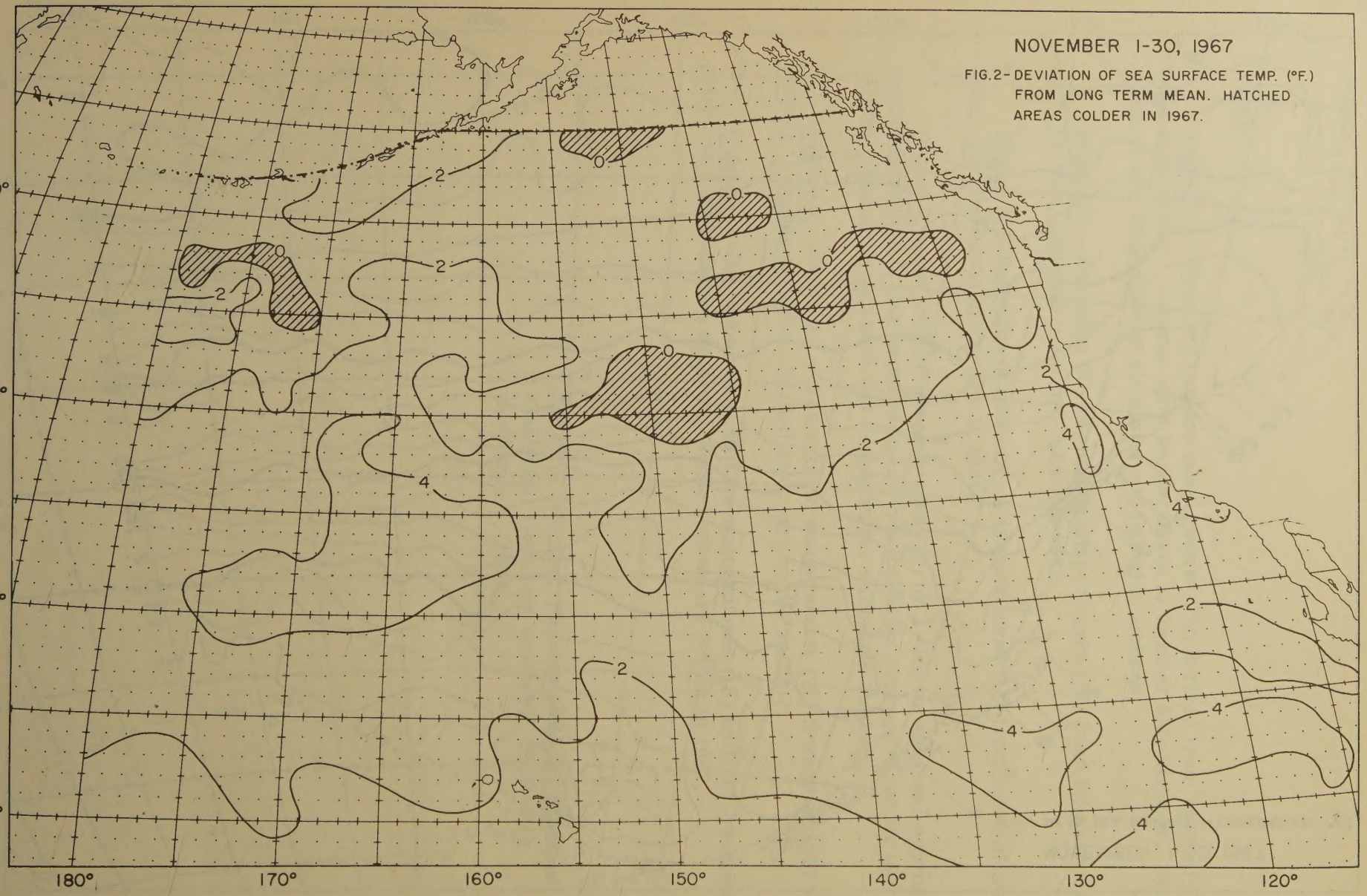
Figure 4.--Sea surface temperatures (°F) by 1-degree squares, approximately 3000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

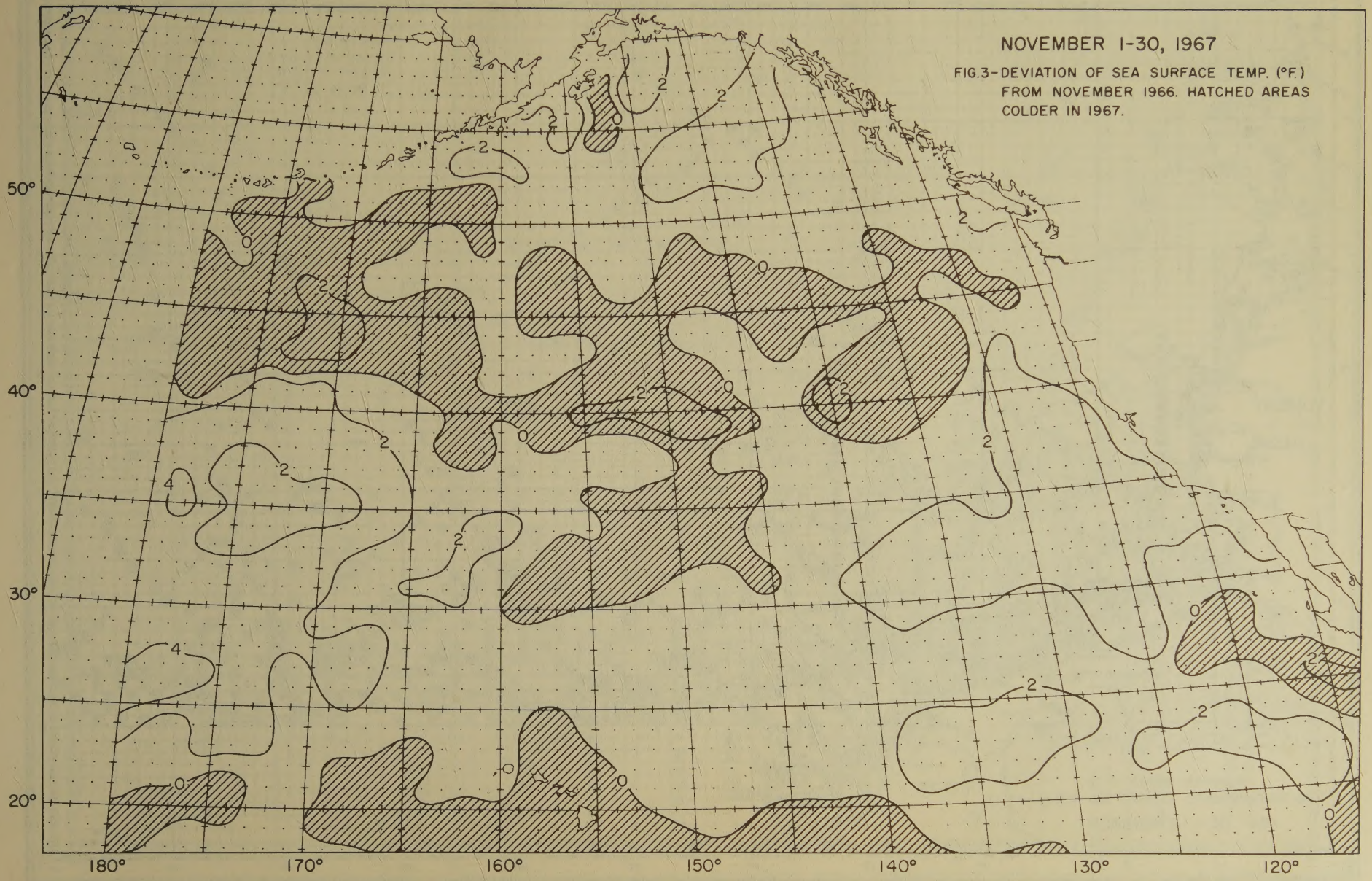
Figure 5.--Deviation of sea surface temperatures (°F) November 1967 - November 1966 by 1-degree squares. Shaded areas are colder in 1967.

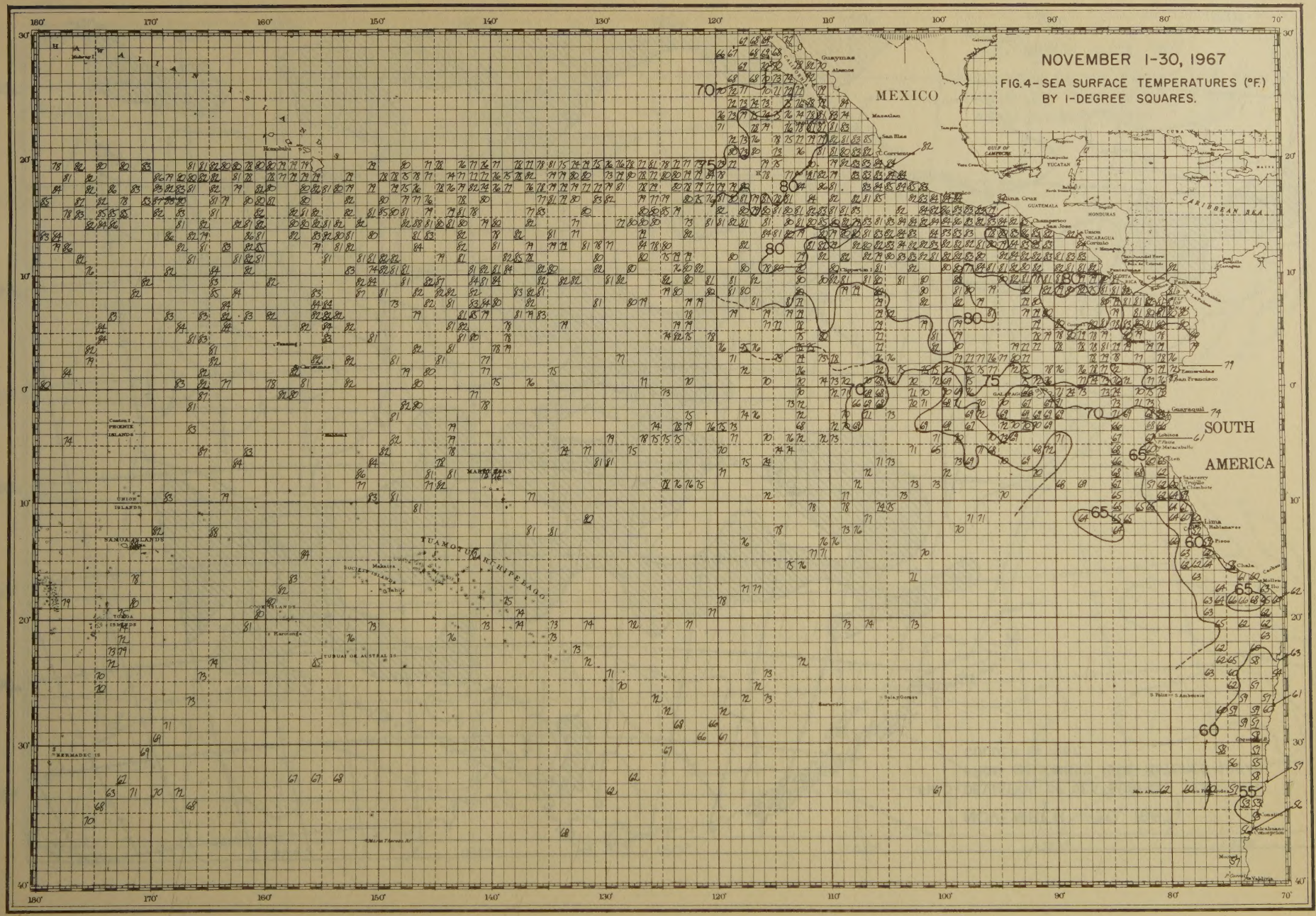
Figure 6.--Deviation of sea surface temperatures (°F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder in 1967.

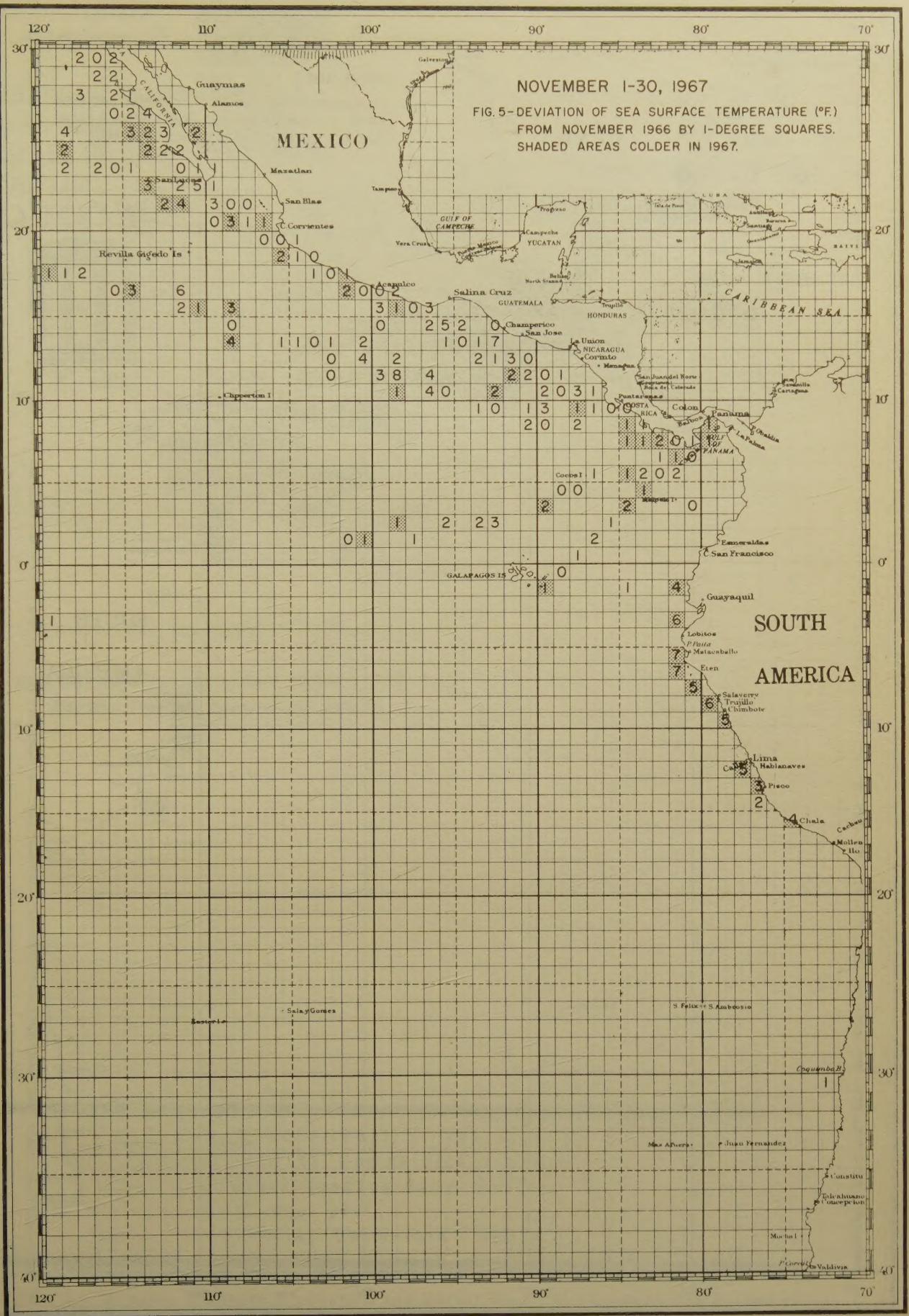
James A. Renner, Fishery Biologist (General)
Kenneth S. Raymond, Scientific Illustrator
December 7, 1967

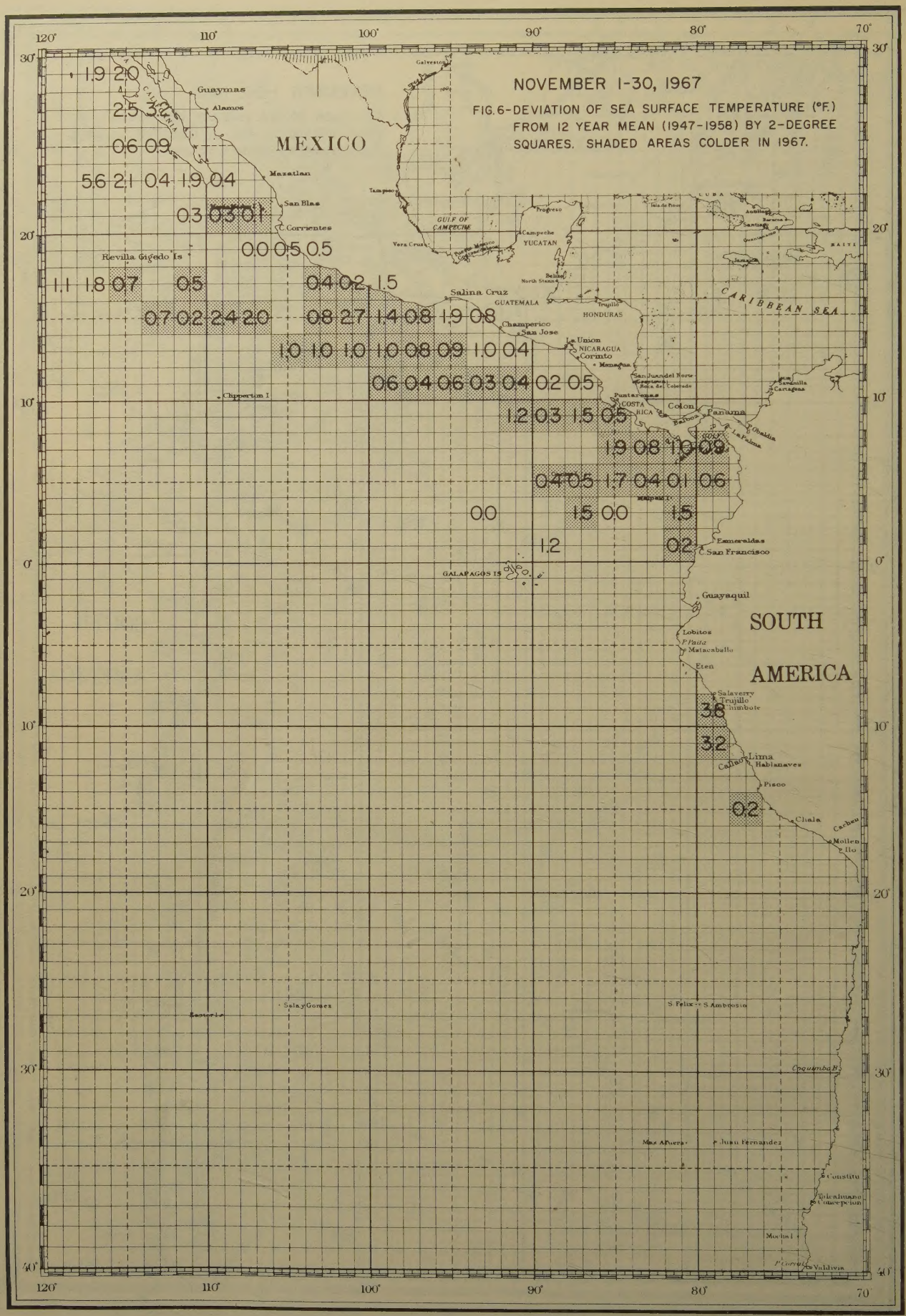

NOVEMBER 1-30, 1967
FIG.1- MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


NOVEMBER 1-30, 1967
FIG. 2 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1967.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
0
2
4


NOVEMBER 1-30, 1967
FIG.3-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM NOVEMBER 1966. HATCHED AREAS COLDER IN 1967.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


NOVEMBER 1-30, 1967
FIG. 4 - SEA SURFACE TEMPERATURES (°F.) BY 1-DEGREE SQUARES.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
HONDURAS
NICARAGUA
GUATEMALA
COSTA RICA
PANAMA
CUBA
HAWAIIAN ISLANDS
Honolulu
Hilo
Guaymas
Mazatlan
San Blas
Acapulco
Salina Cruz
Champerico
San Jose
Corinto
Tapachula
Puerto Armuelles
Balboa
Panama
Colon
Cristobal
Esmeraldas
San Francisco
Guayaquil
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Arica
Iquique
Antofagasta
Valparaiso
Talcahuano
Concepcion
Mas Afuera
Juan Fernandez Is.
Mas a Tierra
Easter Island
Pitcairn Island
Tahiti
Marquesas Islands
Tuamotu Archipelago
Society Islands
Samoa Islands
Tonga Islands
Fiji Islands
Kermadec Is.
Tubuai or Austral Is.
Union Islands
Phoenix Islands
Line Islands
Marshall Islands
Gilbert Islands
Ellice Islands
Solomon Islands
New Hebrides
New Caledonia
Norfolk Is.
Lord Howe Is.
Auckland Is.
Macquarie Is.
Balleny Is.
Peter I. Is.
Scott Reef
Ashmore Reef
Cartier Is.
Timor Sea
Arafura Sea
Gulf of Carpentaria
Gulf of Tehuantepec
Gulf of Panama
Gulf of Guayaquil
Gulf of Fonseca
Gulf of Nicoya
Gulf of Campeche
Yucatan
Campeche
Veracruz
Tampico
Progreso
Belize
Cayman Is.
Jamaica
Haiti
Puerto Rico
Aruba
Curacao
Trinidad
Barbados
Galapagos Is.
Malpelo I.
Cocos I.
Clipperton I.
Revillagigedo Is.
Socorro I.
Roca Partida
Isla Gorgona
Isla Malpelo
Isla Cocos
Isla Clipperton
Isla Socorro
Isla


NOVEMBER 1-30, 1967
FIG. 5-DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM NOVEMBER 1966 BY 1-DEGREE SQUARES. SHADED AREAS COLDER IN 1967.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CALIFORNIA
GULF OF CAMPECHE
GULF OF PANAMA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
YUCATAN
CUBA
HAITI
JAMAICA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Acapulco
Salina Cruz
Champerico
San Jose
La Union
Corinto
Managua
Chipperton I
Panama
Colon
Cocos I
Esmeraldas
San Francisco
Guayaquil
Lobitos
Pta Pariña
Matacaballo Pt
Eten
Salaverry
Trujillo
Chimbote
Lima
Hablanaves
Pisco
Chala
Callao
Mollendo
Ilo
Salas y Gomez
Easter I
S. Felix
S. Ambrosio
Juan Fernandez
Valdivia
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
40°


NOVEMBER 1-30, 1967
FIG. 6-DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM 12 YEAR MEAN (1947-1958) BY 2-DEGREE SQUARES. SHADED AREAS COLDER IN 1967.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Salina Cruz
GUATEMALA
HONDURAS
Champerico
San Jose
La Union
NICARAGUA
Corinto
Managua
Punta Arenas
COSTA RICA
Colon
Panama
Chippertm I
Esmeraldas
San Francisco
Guayaquil
Lobitos
Talara
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Ilo
Arica
Iquique
Mas Afuera
Juan Fernandez
Valdivia
1.9 2.0
2.5 3.3
0.6 0.9
5.6 2.1 0.4 1.9 0.4
0.3 0.3 0.1
0.0 0.5 0.5
1.1 1.8 0.7 0.5
0.4 0.2 1.5
0.7 0.2 2.4 2.0
0.8 2.7 1.4 0.8 1.9 0.8
1.0 1.0 1.0 1.0 0.8 0.9 1.0 0.4
0.6 0.4 0.6 0.3 0.4 0.2 0.5
1.2 0.3 1.5 0.5
1.9 0.8 1.0 0.9
0.4 0.5 1.7 0.4 0.1 0.6
0.0 1.5 0.0 1.5
1.2 0.2
3.8
3.2
0.2
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
40°